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Investigating Environmental Security in the Kingdom of Denmark
Paper presented at BSSI Societal Security Workshop in Aalborg February 7th 2020
Søren Dosenrode and Malayna Raftopoulosⁱ

This paper will analyze the environmental security challenges facing the Kingdom of Denmark in relation to climate change which poses both significant threats and opportunities for society. Addressing these issues can only be done through cooperation bi- and multilaterally. The paper begins with an introduction to the Kingdom of Denmark, followed by a small section on the concepts 'security', 'environmental security' and 'small state'. Then following section will examine the impact of climate change on the Denmark and its environmental policy. Lastly, the paper will discuss the environmental threats and possibilities facing the Kingdom of Denmark.

The Kingdom of Denmark

The Kingdom of Denmark (or the Realm) is more than just the geographical area called 'Denmark' it also comprises the Faroe Islands and Greenland. With a population totaling a bit less than 6 million inhabitants (Denmark: 5'806.000; Faroe Islands: 49'900; Greenland: 55'800) and a total surface of some 2'210,500 square kilometers, stretching over 5 time zones, including arctic as well as tempered climate zones, and a costal line of more than 52'690 km, the realm is heavily exposed to environmental changes, and especially on Greenland the combination of a small population and a huge territory is a challenge.

Greenland is the world's largest islands, with an area of 2.166 million km² of which 85% is covered by the ice sheet. Until 1953, Greenland was a Danish colony. However, under the new constitution of 1953 it was fully integrated into the Danish state. This led to attempts of 'Danifying' the original Inuit population. Gad (2004) describes how first the physiognomy marked the difference between the Inuits and the Danes, later it was the seal hunting which played this role, and since the beginning of the 20th century language has been the marker for Greenlandic identity, combined with seal hunting. In 1979, Greenland was granted home rule by the Danish government and in 2008, voted in favour of the Self-Government Act, which transferred more power from the Danish government to the Greenlandic government.

The Faroe Islands consist of 18 islands with a total area of 1,399 km². Its population descends from Norse Vikings, and they speak a variation of old Norse language. Since 1843 they were a Danish county, and after the Second World War they got Home Rule, which has been extended successively (Dosenrode 2015). Whereas most competencies are devolved to the Faroe Islands and Greenland, security- and foreign policy remains the prerogative of the Danish government in Copenhagen, in cooperation with the home rule authorities.

Concept

In spite of size of the Realm, it is a small state, which is to be understood as (Schou 1980 /p. 19, our translation): “a state, which by its own as well as by official decision makers of other states is perceived as limited in its possibilities of action in the international system by its inferior size.” A traditional approach to ‘security’ would be to see it as a result of the structures of the international System (Waltz 1979), this is a typical realist approach. Barry Buzan was more open, when he in 1983 wrote that security was an underdeveloped concept, arguing for a broader concept, including the societal aspect, thus opening towards a wider understanding than the traditional realist approach. Buzan’s broad security concept opened for the inclusion of the environment. In this paper, we lean on the AC/UNU Millennium Project defining environmental security as “[...] the relative public safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement or design and originating within or across national borders.”

Dependencies and interdependencies

Being a small state, the Kingdom of Denmark is to a high degree dependent on its surroundings, be it (security-) politically, economically or environmentally. Small states are limited in their freedom of action, or rather in their ability to change their environment by themselves. The strategy to contain threats and cope with dependencies has been that of a typical small state approach, namely cooperation, building alliances and international organizations, and to adopt, when change is impossible.

The Kingdom of Denmark is a founding member of the United Nation (UN) and is a member of most, if not all of its sub-organizations. It was also a founding member of the North Atlantic Treaty Organization (NATO). With regards to the European Union, only Denmark is a member, joining in 1973. Concerning environmental changes, it is obvious that the Realm alone cannot change much on its own. Thus, the Denmark, acting on behalf of the Realm, has conducted a pro-active policy within the EU, in order to use the EU as a levy globally in e.g. the COP negotiations. Denmark together with the UK and the Netherlands have pursued very environmental positive strategies (one example is the environmental minister Connie Hedegaard inviting 30 world leaders including the foreign ministers of the United States in 2009, to see the actual melting of the ice cap. She later became EU Commissioner for Environment). Denmark has played a critical role in pushing the EU to adopt an ambitious position on climate change. There are Danish fingerprints on the environmental policies of the EU e.g. as it was seen regarding the EU position towards the Paris Agreement signed in 2016.

The Impact of climate change on Denmark

Although Denmark, a peninsula surrounded by around 400 islands, is primarily a low-lying country covered with glacial moraine deposits which are made up of a mixture of clay, sand, gravel, limestone, and boulders which have been carried by glaciers from the mountains of Scandinavia and raised from the bed of the Baltic Sea, is expected to be one of the countries that will be the least vulnerable and most prepared for climate change. In an annual index created by the University of Notre Dame, Denmark came in as the seventh country in the world, just behind the other Scandinavian countries of Norway, Sweden and Finland who were ranked first, third and fourth respectively. Since the early 2000s, Denmark has constantly been rated between the top five and top seven countries (ND-GAIN, 2019). Patrick Regan, who is behind the Notre Dame Global Adaptation Index, explained in 2017 (videnskab 2017, our translation) that Denmark's rank reflects that it has a healthy political system: "You might be challenged, as you are a low country which may be affected by raising sea levels in the future, but you have got the right political and social infrastructure to be able to handle this". However, that being said, Denmark will still experience a number of changes to its weather patterns in the future which can't be ignored.

According to a report produced by the Danish Meteorological Institute (DMI), overall Denmark is expected to be warmer, with milder winters in particular. It will also experience more rainfall during winter and the summer, despite the fact that summers are likely to get drier over large parts of the European continent, as well as increasingly more extreme weather events such as drought and heatwaves over the summer months. It is also like that the country will see an increase in storm strength due to a more westerly wind direction and rising sea levels especially over the North Sea, but not necessarily more storms. DMI also observed that that rainfall at a national level has increased by around 100mm over the past 150 years. Furthermore, while the temperature had risen by approximately 1.5°C since 1870, it is expected to rise by another 1.2°C by the end of this century (2081-2100) (DMI, 2014). However, in Greenland, temperatures are expected to increase at a rate 1.2 to 3 times faster than the global average in the 21st century (Ford and Goldhar, 2012). While the rise in sea level is highly dependent on the melting of snow and ice as well as the heating of the water, sea levels along the coastline of Denmark except around North Jutland have risen and are expected to rise further in the next 100 years because of climate change (DMI, 2014). This is also a phenomenon that is likely to affect the coastline of Greenland and the Faroe Islands. Climate change and rising sea levels will result in salinization, flooding and coastal erosion, melting ice caps and affect human and ecological systems, including, among others, health, heritage, freshwater, biodiversity, agriculture, and fisheries.

Danish climate change policy

the Danish government's strategy on climate change consists of two key elements: national efforts and European efforts. On May 16, 2002, the Danish parliament voted to ratify the Kyoto Protocol, confirming Denmark's, Greenland's and the Faroe Islands' legal commitment to meeting the requirements of the Kyoto Protocol. On November 1 2016, Denmark officially ratified the Paris Agreement at the United Nations in New York. Once again, Denmark confirmed the Realm's commitment to addressing climate change and sent a clear signal to the rest of the international community that there is a need for quick action. With regards to the European Union, Denmark, alongside other EU member states has committed to the Burden Sharing Agreement in order to reach the overall EU reduction level in greenhouse gases by 20 percent in comparison to 1990s level by 2020 (Danish Government, 2013). The Danish government has set some highly ambitious objectives including reducing greenhouse gas emissions by 70% below its 1990s levels by 2030, that all energy consumption, including the transport sector, will be based on renewables by 2050, as well as committing to climate finance for the developing countries. The new Climate law, one of the first to be passed in the world, introduced in 2019 also includes an ongoing obligation to deliver on international agreements, including climate finance to developing countries. Leading the green transition, Copenhagen is aiming to become the world's first carbon neutral capital city already by 2025.

Key points of the Climate Law Act of December 2019

- Denmark is to reduce greenhouse emissions by 70 percent by 2030
- Every year, the Danish Government will present Climate Action Programmes with concrete political initiatives to decarbonize every sector.
- Milestones for 2025 are to be established in connect to Denmark's climate action plan (which is expected to be approved in Spring 2020)
- Annual follow-ups to ensure that plans are on track and that the Danish government is implementing the required policies
- The inclusion of the principle that goals lower than what has already been achieved cannot be set
- Reductions of greenhouse gases must occur on Danish soil
- Should the government be short of reaching the 70 percent target as 2030 draws near, a last 'escape clause' has been added to allow for other solutions to be found

Environmental threats and possibilities

In the first half of this paper, the consequences of climate change were analyzed. In this part, environment threats and possibilities are examined, starting which is likely to feel the impact of climate change most, within the Realm, followed by the Faroe Islands and Denmark.

Greenland

The societal consequences and opportunities of climate change are largest in Greenland. Put very briefly, the melting of the Inland Ice (the Icecap) will open up new opportunities for the exploitation of natural resources, and the melting of the North Pole ice will open up new shipping routes, bringing Greenland very much 'closer to the rest of the world'. Or in the words of the Strategy for the Arctic 2011-2020 (p. 9): "One of the most significant global issues over the past 10 years is the vast changes in the Arctic region. The world has again turned its attention to the Arctic, this time mainly because of the climate effects in the Arctic, the economic potential of the region, and the geopolitical implications of change in the Arctic."

Three aspects will be looked into: economic, political, and societal implications all of which are interlinked.

As indicated the warmer climate lays bare and eases access to resources. Greenland has (Strategy for the Arctic 2011-2020, p. 25) "targeted gold, zinc, copper, diamonds, rubies and a number of critical metals including rare earth elements." These natural resources caught the eyes of the Chinese state following its 'going out strategy' from 2000. A huge Chinese interest invoked concerns which, according to Zeuthen & Raftopoulos, were centred around four concerns (2017, p. 1): "(i) labor issues, in particular the use of Chinese workers and Chinese labour standards and employment practices in host countries; (ii) the potential threat of China to block long-term access to strategic raw materials; (iii) concerns that Chinese state investments and state-backed loans were undermining international standards and promoting corruption, and (iv) that China would expand its control over weaker countries [...]." In autumn 2019 the Danish Military Intelligence warned the Home Rule Authority explicitly against large Chinese investments, there was a risk of political interference and blackmail due to the small size of the Greenlandic society (Kalaallit Nunaata Radioa, 2019).

Off the coast of Greenland, it is estimated that 47 billion oil and gas are waiting to be discovered. The exploitation of this would add wealth to the Greenlandic society if explored in the right way, and in particular with regard to the fragile environment. The Exxon Valdez oil spill occurred in Prince William Sound, Alaska, 1989, shows how extremely vulnerable the Arctic is. This vulnerability is also a threat to take into consideration if the Arctic opens as a new area of ship transport between Asia and Europe it is estimated that one could save 40% in fuel costs (and pollution) and shipping time (Strategy for the Arctic 2011-2020, p. 9). A problem also being relevant in relation to the rapidly developing sea-cruise tourism.

The latest report from the Department of Housing, Infrastructure and Traffic, and the Department of Fishery, Hunting and Agriculture from 2012 addresses the climate change's influence on fishery and hunting. According to the report, fishery, which is by far Greenland's largest income generator is addressed with a certain optimism (2012, p. 6) as the seas will be open – without ice – and new stocks of fish will

move northwards. Concerning ice fishery, which has a both income generating and cultural aspect, the tone is more skeptical. Above all, there is uncertainty about the concrete development (e.g. p.6, p. 43).

For a small society, large investments in exploitation of minerals and investment in minerals (aka China) is a potential threat. At the moment, this threat is experienced more from Denmark than from Greenland. Also, the opening of the Arctic Sea for sailing and exploitation is a challenge to the states that border it. There still remains the question of drawing borders in the sea, with all members of the Arctic Council claim large shares. The Russian strengthening of its military in the Arctic (information 2015), is a clear sign of the military threats facing the Realm.

Societal challenges are at least twofold: The melting of the ice cap will over time make ice fishing and hunting impossible, thus annihilating / removing an important part of the Greenlandic identity and culture. This following the period of 'danification' in the 1950s and 1960s is a serious threat towards the Greenlandic identity. The same goes for a larger influx of foreigners either in the form of worker (for exploitation of raw materials) or as tourists. For a society with around 55'000 inhabitants the utmost caution is a necessity.

Summing up. Greenland is the part of the Danish Realm feeling the environmental changes – global warming – the most. It poses a number of economic, political and societal challenges. But, in an overall view, the Danish government and the Greenlandic Home Rule Authority are convinced, that the global warming can be turned to an opportunity, creating a richer, sustainable developed Greenland (Strategy for the Arctic 2011-2020, p. 9): "Overall we can expect a multi-faceted boom in activities in the Arctic over the coming decades." A prophecy also going for the Faroe Islands

The Faroe Islands

The Faroe Islands placed in the North Atlantic roughly between Island, Southern Norway and Scotland is, like the rest of the realm, threatened by rising sea level, which is a long-term process, and stronger storm, which are felt already now (Sermitsiaq 2017). However, like especially Denmark, the Faroe Islands has a healthy political system with a solid political and social infra structure. As of now, the Faroe Islands experience a boom of their fishery industry, due to mackerel stocks having moved towards the islands.

Denmark

The last, and especially the current Danish government, has made climate change a priority both at home and globally. As already mentioned, Denmark uses her membership of the EU to push for a greener agenda in Europe and globally (Energistyrelsen 2020 a). In 2019 the Government and a majority of parties decided that the ambitious aim was to make Denmark independent of coal, oil and gas by 2050. Apart from

diminishing CO2 emissions, Denmark's economy would be less dependent of fluctuations in Oil and Gas, and the energy security would be strengthened. (Energistyrelsen 2020 b) Whereas climate change appears not to pose a significant threat to the Danish economy, the question of 'climate migrants' is being heatedly discussed. Still, migration, partly caused by climate changes, caused heated political discussions and a feeling of societal threat, although Denmark has only received 21313 asylum seekers in 2015 (all time high) and 3559 in 2019 (Tjek det 2020).

Conclusion

The awareness of the consequences of global warming and the outlet of CO2 is high throughout the realm, as the numerous reports and action plans from the Danish government and from home rule authorities on the Faroe Islands and Greenland showⁱⁱ. Globally the Kingdom of Denmark follows a strategy of regional cooperation (EU) with the aim to use the EU to press for serious CO2 reductions globally (UN). On tactic in this connection is 'leading by example' setting very ambitious CO2 aims for Denmark itself, focusing on remunerable energy. Denmark has shown remarkable climate ambition particular in the new climate law passed at the end of 2019 and has taken the lead in combating climate change. However, in order to reach these impressive targets, the government must accelerate its transition to a sustainable society and into more circular economy.

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